

CLAIMS

What is claimed is:

1. A discrete radiation emitter device comprising:
at least two radiation emitters emitting radiation of different wavelengths;
first and second electrical leads electrically coupled to at least one of said radiation emitters; and
an encapsulant configured to encapsulate said radiation emitters and a portion of said first and second electrical leads, said encapsulant further configured to have a surface defining an optical lens including a plurality of concentric circular grooves, wherein said optical lens is a divergent lens.
2. The radiation emitter device of claim 1, wherein said lens is a multi-faceted Fresnel lens structure having a plurality of risers and Fresnel facets defining the plurality of concentric circular grooves.
3. The radiation emitter device of claim 1, wherein said radiation emitters are LED chips.
4. The radiation emitter device of claim 1, where at least one of said radiation emitters is an LED chip.
5. A radiation emitter assembly comprising:
at least one discrete radiation emitter device comprising:

at least two radiation emitters emitting radiation of different wavelengths;

first and second electrical leads electrically coupled to at least one of said radiation emitters; and

an encapsulant configured to encapsulate said radiation emitters and a portion of said first and second electrical leads, said encapsulant further configured to have a surface defining a divergent optical lens; and

a secondary reflective cup disposed proximate said divergent optical lens of said radiation emitter device.

6. The radiation emitter assembly of claim 5, wherein said secondary reflective cup is positioned about the periphery of said divergent optical lens such that said reflective cup reflects radiation emitted from said divergent optical lens.

7. The radiation emitter assembly of claim 5, wherein said divergent optical lens includes a plurality of concentric circular grooves.

8. The radiation emitter assembly of claim 5, wherein said secondary reflective cup is parabolic.

9. The radiation emitter assembly of claim 5, wherein said secondary reflective cup is elliptical.

10. The radiation emitter assembly of claim 5 and further including a secondary lens disposed at an opposite end of said secondary reflective cup from said discrete radiation emitter device.

11. The radiation emitter assembly of claim 5, wherein said radiation emitter assembly is a vehicle lamp assembly, which further comprises a mounting mechanism for mounting the vehicle lamp assembly to a component of a vehicle.

12. The radiation emitter assembly of claim 5, where at least one of said radiation emitters is an LED chip.

13. A map lamp assembly for a vehicle rearview mirror, said map lamp assembly comprising:

at least one discrete radiation emitter device comprising:

at least two radiation emitters emitting radiation of different wavelengths;

first and second electrical leads electrically coupled to at least one of said radiation emitters; and

an encapsulant configured to encapsulate said radiation emitters and a portion of said first and second electrical leads, said encapsulant further configured to have a surface defining a divergent optical lens; and

a secondary reflective cup disposed proximate said divergent optical lens of said radiation emitter device.

14. The map lamp assembly of claim 13, wherein said secondary reflective cup is positioned about the periphery of said divergent optical lens such that said reflective cup reflects radiation emitted from said divergent optical lens.
15. The map lamp assembly of claim 13, wherein said divergent optical lens includes a plurality of concentric circular grooves.
16. The map lamp assembly of claim 13, wherein said secondary reflective cup is parabolic.
17. The map lamp assembly of claim 13, wherein said secondary reflective cup is elliptical.
18. The map lamp assembly of claim 13 and further including a secondary lens disposed at an opposite end of said secondary reflective cup from said discrete radiation emitter device.
19. The map lamp assembly of claim 13, where at least one of said radiation emitters is an LED chip.